

DETERMINAREA LOTURILOR OPTIME ÎN CONDIȚIILE EXISTENȚEI UNOR CONSTRÂNGERI AGREGATE FOLOSIND ALGORITMI EVOLUTIVI

ESTABLISHING THE OPTIMUM ORDER QUANTITIES IN A CONSTRAINED MULTI-ITEM INVENTORY SYSTEM USING EVOLUTIONARY ALGORITHMS

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Abstract: This paper presents the establishing of the optimum order quantities in a multi-item inventory system with constraints on storage space and capital tied up in inventories. In solving the optimization problem, an original two-phase enhanced evolutionary algorithm (2PhEA) has been used, inspired from the evolutionary concept of “punctuated equilibrium”. For the case with one constraint regarding the storage space, a comparison with the results obtained using the Lagrangian multipliers has been achieved.

Keywords: multi-item inventory systems, resource constraints, evolutionary algorithms.